THE JOURNAL OF SCHOOL HEALTH

Vol. XXII No. 5

MAY
1952

PUBLISHED BY
THE AMERICAN SCHOOL HEALTH ASSOCIATION

AMERICAN SCHOOL HEALTH ASSOCIATION

Organized 1927

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THE JOURNAL OF SCHOOL HEALTH

THE AMERICAN SCHOOL HEALTH ASSOCIATION

3335 Main Street, Buffalo 14, N. Y.

Published monthly, except July and August, at Buffalo, N. Y.

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SUBSCRIPTION RATES TO THE JOURNAL

Membership dues, $3.00 including Journal: Subscription $3.00

Single copies 35c, send payment with order

Address all communications to

THE EDITOR, The Journal of School Health

3335 Main Street, Buffalo 14, N. Y.

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The American School Health Association

Entered as second-class matter at the Post Office at Buffalo, N. Y. October 5, 1937

THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XXII MAY, 1952 No. 5

THE METHODOLOGY OF COLORADO'S CASE-FINDING PROGRAM FOR CHILDHOOD HEART DISEASE*

By GEORGE J. MARESH, M.D., H. J. DODGE, M.D., *and* JOHN A. LICHTY, M.D.

From
The Colorado Heart Association
The Colorado State Department of Public Health
and
The University of Colorado School of Medicine

I. INTRODUCTION

The scope of the rheumatic fever problem in the Mountain States, particularly in Colorado, has been disputed. Consistently high mortality rates have been recognized for some years.[1, 2] The Armed Forces felt that rheumatic disease unduly complicated their training program in the Rocky Mountain area during World War II.[3] Nevertheless, the experience of the average physician in this area belies the impression given by military experience and study of mortality rates. One sees rheumatic fever and heart disease, to be sure, but not in a disturbing proportion of the population. Because of this rather paradoxical situation, several groups interested in public health felt the problem deserved a clearer definition by means of a sound epidemiological and statistical study. One aim would be to examine a representative segment of the population and to determine prevalence rates for heart disease. If there were any unusual epidemiological aspects to the disease in Colorado, one would then be in a better position to estimate the nature and magnitude of the problem as well as to concentrate future control measures on the segments of the population at greatest risk from this disease. It was not anticipated that the initial prevalence study would answer all the questions, but rather that it would point up major clues which could then be investigated by more intensive methods.

In addition, case finding would be accomplished. This latter feature, of course, is an invaluable aid in promoting community

* Presented before the American School Health Association at San Francisco, California, October 29, 1951.

interest in such a study. Not only would case finding be accomplished as the other major aim of the study, but future case-finding programs could be made much more specific by designing them around the pattern determined by the initial study of prevalence.

II. METHOD OF SAMPLING

A preliminary report of the general findings is being made elsewhere.[4] The present report deals with the methodology of the study. The first problem in such a study is the selection of the sample. Expert statistical consultation as to the sampling technique was obtained from an agency having no particular interest in the disease in question. In this case we wanted information about the state as a whole. The only readily accessible segment of the general population is the school population. Since many children, particularly those of the lower economic groups, drop out of school early in life, we decided to use the oldest school group legally required to attend school. Since Colorado law requires school attendance through the eighth grade or fourteen years of age, we were advised that the sixth grade population would most nearly represent the population as a whole from a racial and economic standpoint. Though it is recognized that some individuals might suffer rheumatic fever and heart disease later in life, Wilson[5] indicates that the onset of an initial attack after twelve years of age is rather uncommon. We therefore feel that the incidence of rheumatic heart disease in this group is not greatly dissimilar to that in the adult population. There were reportedly approximately 18,000 sixth grade students in Colorado in the 1949-1950 school census. We felt that a carefully handled 50 per cent sample would meet our needs. Accordingly, such a sampling was begun, utilizing a random selection of every other child on the class roster in the urban communities in Colorado. The rural schools were to be selected with the help of the county superintendent and a 100 per cent sample done in a representative group of such schools. As might be expected, two factors tended to interfere with the sampling process. In areas without an organized school health service there was a tendency on the part of the school administration to weight the sample by passing up a normal healthy individual to include a child with a rheumatic history or other health problem. With rural schools the tendency was to include a school which got little attention, medical or otherwise, by reason of isolation, small enrollment, or economic status of the community instead of a better situated school. These problems were not serious in Denver and Pueblo, the state's largest communities, where a 50 per cent sample

was done, because there was adequate supervision of the sampling process. It became evident that we could not obtain satisfactory results by trying to adhere to such a sample in the smaller, average-sized community. We then agreed to do a 100 per cent sample of sixth graders in all the communities of each of the less populous counties visited. Because this necessitated a larger number of examinations per county, it meant we would not be able to visit every county, but we were able to visit the more populous areas and those representing the extremes of weather, altitude, occupation, race, and economy.

The extra group, those not in the sample but seen at the request of local physicians, school nurses and other interested persons, served a valuable function from several standpoints. Most importantly, it protected our regular sample from weighting. It also enabled us to weigh the value of case finding restricted to examination of individuals with suspected or diagnosed rheumatic fever or heart disease or both. Many of these individuals had known heart disease but evaluation had been inaccurate, particularly those with congenital cardiac lesions.

III. PROCEDURE

Arrangements were made well in advance on a state-wide basis. The Colorado Heart Association and the State Department of Public Health agreed to finance the study and lent their full support to it. Through their combined efforts the State Medical Society and the University of Colorado Department of Medicine gave approval to the project and lent their names as sponsoring agencies. Then the State Department of Education and heads of the state parochial school systems gave approval and authorized the contacting of the local school administrators concerned. The State Parent-Teachers Association promised support in the local communities.

Our routine procedure on visiting an area varied slightly, depending on the situation encountered. In all cases the approval of the local medical society was secured. All local arrangements were made through the local health department where one was actively functioning. If such was not the case, the County Superintendent of Schools was contacted and the names of school officials to be seen at each school were secured. If a school nurse was employed, she was asked to take care of all arrangements. If not, the principal of the school was contacted and questionnaires sent for distribution to potential examinees. The chief problem presented in handling such a program is to reach the responsible school official who is to distribute the questionnaires and solicit co-operation of parents of

the children to be examined.

The only feasible method of gathering historical as well as identifying data in a project of such scope was that of the questionnaire. With full appreciation of the limitations of the method, the questionnaire was made as simple as possible. Despite great care in design, it was shown by use to be far from fool-proof.

The questionnaire consisted of four parts. The first covered identification of the child, the family, and the family physician plus length of residence of the child in the county. The second part was made up of three questions as to disease history relating to rheumatic fever or heart disease in the child to be examined or in his immediate family. The third part was made up of questions pertaining to size of the family, crowding in the home, and crowding in the sleeping quarters of the child in question. The fourth part was essentally a form for consent to examination. Essentially the questionnaire was designed to provide a basis for estimating the prevalence of previous *diagnosis* of rheumatic heart disease or rheumatic fever. There is no reliable method in a study of this type to estimate the actual prevalence of the diseases in question. The questions pertaining to crowding in the home were included as the most feasible way to obtain some approximate data on social and economic status of the individual examinee.

The response to the questionnaire was both amazing and gratifying. Approximately 94.8 per cent of the sixth graders returned questionnaires completed satisfactorily in most of the essential respects. The response to the question on sleeping arrangements was least satisfactory.

The actual conduct of the examination was relatively simple if advance arrangements had been made well. While waiting for examination, the children were interviewed by the secretary who listed further identifying and statistical information on a special examination form. A semi-isolated room provided with one long or two short flat-topped tables was used for examining. The children had their anterior chest bared or were asked to strip to the waist whenever possible. Then one examiner performed a stethoscopic examination of the child's heart with the child in the sitting and supine position, and in the left lateral position where indicated. If all was normal only one examiner saw the individual. If a questionable finding was noted, the other examiner saw the child. The examination was completed by filling out a check list type of examination record.

The examining team deserves special comment. It was felt

that if the group used were kept as small and as constant as possible, the value of the observations would be increased. Accordingly, one of us (GJM) took part in 95 per cent of all examination sessions. The other member of the team was one individual (HJD) for approximately 50 per cent of the examinations. One or the other was present at every examination session. The remainder of the time, one or another of a group of eight internists and pediatricians with a great deal of common experience in evaluation of childhood cardiac lesions—chiefly in the Denver Area Rheumatic Fever Diagnostic Service—shared the burden of examination. It should be emphasized that disagreement as to the presence or absence of organic heart disease among these observers was very rare because of common agreement as to criteria of diagnosis in advance of the study. The multitude of functional murmurs seen makes this an important prerequisite for such a case finding team.

In the majority of cases only verbal reassurance was given to the child as a report. Where requested in writing, a written statement of normality was sent home with the child. If the child had definite or suspected heart disease, a report was not sent home by the child but a written statement of our findings and conclusions was sent to the family physician. Notification of the family, in such a case, was handled through the physician and school nurse wherever possible. A written list of the children seen in each school with a notation as to the presence or absence of functional murmurs and organic heart disease was sent either to the superintendent of schools, or preferably, to the nurse for incorporation into the child's school health record. In all cases the school officials were asked to treat the report confidentially and to take no initiative in the matter except at the request of the family physician. If a local health department was actively functioning it was given a detailed report and any individual who had suspected or definite heart disease, but who had no private physician, was referred to the health department for assistance in securing medical care.

There were a certain number of refusals to consent to examination. This was less of a factor than we anticipated, but on the whole averaged two to three per cent. The rate of refusal was much lower in rural than in urban areas. Usually refusal was motivated by religious objection or personal grievance with medicine and doctors. A few felt they could supply medical attention, and this procedure was unnecessary duplication of effort. A number of parents replied that their children had been examined recently and found normal and that consent was refused in order to relieve the burden

on the survey examiners. A large segment of parents in one small rural community refused consent for examination of their children because of a schism between the parents and the school board. Inquiry into the characteristics of children for whom consent was denied leads us to believe that they did not differ significantly from those for whom consent was obtained.

Absentees were a problem which had to be dealt with carefully. Whenever possible, we visited a home or returned to the school to see those absent at the regularly scheduled examination. In Denver and Pueblo this was a feasible procedure. For the casual absentee in rural areas, however, this was often not possible. Usually, the nurse or the teacher knew the circumstances of the absence so that our sample was kept as constant as possible. Home-bound absentees with a history or suspicion of rheumatic fever or heart disease were visited wherever possible. In case the questionnaire had been returned, but the child was not available on the day of examination, and follow-up not possible, the child was listed as "Not examined."

In order to facilitate follow-up of suspected or definite heart disease as much as possible such agencies as the Denver Area Rheumatic Fever Diagnostic Service and the Pediatric Cardiac Clinics of Denver General and Colorado General Hospitals were utilized or called to the attention of the doctor if he wished to use them.

IV. RESULTS

The study, as it finally developed, included 41 of Colorado's 63 counties. The counties included have 89 per cent of the state's total population within their confines. Only one of the populous counties of the state had to be omitted. The remainder of the 22 counties not included in the study are among, but do not make up all of, Colorado's counties which are sparsely settled, relatively inaccessible or both.

The regular sample of sixth graders totaled 11,236. On the basis of an estimated 18,000 sixth graders in the state, the survey covered 62 per cent of the total. In addition, the group examined represents a random sampling of 83 per cent of the total estimated sixth graders in the state, for according to the best available figures, the 41 counties studied contain 83 per cent of the total sixth graders.

The provisional prevalence rate of definite heart disease in the regular sample was slightly less than 1 per cent (9.4 per 1,000). The distribution of survey diagnoses is given in the accompanying table.

TABLE I
DISTRIBUTION OF SURVEY DIAGNOSES

Diagnosis	Group			
	Regular		Extra	
	Number	Rate per 1000	Number	Rate per 1000
All Diagnoses	**11,236**	**1000.0**	**1,705**	**1000.0**
Not examined	37	3.3	3	1.8
No heart disease	6841	608.8	925	542.5
Physiological murmur only	4094	364.4	556	326.1
Potential rheumatic heart disease	96	8.5	81	47.5
Suspected heart disease, all types	63	5.6	25	14.7
Definite heart disease*	105	9.4	115	67.4
R.H.D.	74	6.6	79	46.3
C.H.D.	29	2.6	26	15.2
R.H.D. + C.H.D. combined	1	0.1	8	4.7
Other	1	0.1	2	1.2

* R.H.D. = rheumatic heart disease; C.H.D. = congenital heart disease.

V. SUMMARY

A method employed in a state-wide study of the prevalence of childhood heart disease is outlined. The various factors to be considered and the pitfalls encountered are explored. We feel that such a plan is feasible for use where a sound statistical study is needed in laying the groundwork for future attempts at control of the types of heart disease most commonly seen in children.

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INFECTION IS PREVENTED — AND LIVES SAVED

By MRS. GARRIT DEKONING, R.N.

Executive Secretary, Kent County Tuberculosis Society

Grand Rapids, Michigan

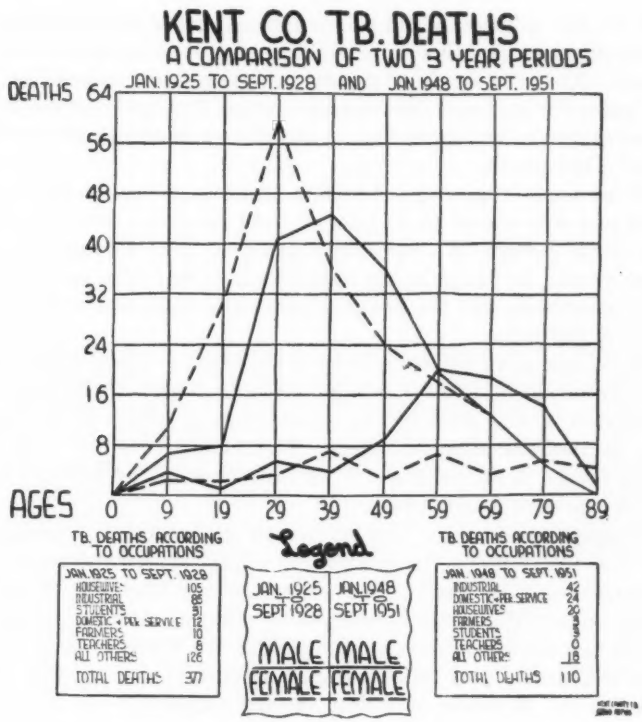
The executive secretary of the local tuberculosis society while addressing the Patients' Committee of the local institution, Sunshine Sanatorium, told about a six-year-old girl who had a positive Mantoux tuberculin when she was tested in school four years ago. As customary, a note was sent home with the child inviting the parents to come to the Christmas Seal X-ray bus in a little country town the next day for a 4x10 stereogram. The young mother was found to have positive sputum and moderately advanced tuberculosis. The pretty secretary of that Patients' Committee beamed and said, "I was that young mother you discovered and sent here. I am about ready for discharge and feel fine, thank you."

Then there was Uncle Ralph, young, still at work, with positive sputum. Our tuberculin tests found him because two nephews had positive reactions in a large parochial school. He is now under treatment in the sanatorium.

On blustery, cold Michigan winter days only 35 and 40 people came to our Mobile Unit when it was located at two small village schools in the county. They were well worth while, however, because in each place we picked up carriers of tuberculosis—first the mother and then the father of the same children who were attending a rural school and had positive tuberculin reactions. Social agencies and their church had to do a lot to arrange care for the farm and four children before these parents could be admitted for sanatorium care.

Going into a large Catholic high school we find Shirley with a tuberculin reaction. Immediate follow-up by our specially trained nurse found the mother complaining of a serious sinus infection, pain in the chest and feeling tired. The first sputum collected revealed many tubercle bacilli on a slide, with X-rays showing bi-lateral, far advanced disease. Sanatorium care is being arranged.

All of these happened recently but case stories such as the above can be recounted numberless times during our program of tuberculin tests and X-ray films since 1930. Results obtained from this continuous, intensive work are best illustrated by the graph.



JAN. 1945 TO SEPT. 1948

Industrial	53
Housewives	22
Domestic & Per. Service	12
Farmers	4
Students	2
Teachers	1
All Others	81
TOTAL DEATHS	175

What is our procedure? It hinges on that most accurate clue in the diagnosis of early tuberculosis, the Mantoux test. It is not only valuable as a clue, but as an "attention arrester" it has no equal. People with a positive tuberculin and all members of their families are immediately interested, want to know all about TB and how it may be kept under control by proper nutrition, enough sleep and rest and avoiding further contact.

Every three years we try to cover every public and parochial school in the entire county—about 55,900 pupils altogether. We

use a 1-1,000 solution of old tuberculin and make X-ray films of the chests of only positive reactors through the grades and high schools. Here the work is chiefly preventive and educational but the "pay-off" in cases discovered comes through careful family follow-up work by nurses who are trained in the epidemiological side of TB control.

Ever hear of giving a 1-10,000 Mantoux to every adult above school age who comes to a clinic or the Christmas Seal X-ray Unit for a chest X-ray? We have been doing so in this county the past fifteen years. Here again the educational power of a positive reaction is enormous and the positive reactor is more apt to return for repeat X-ray films.

A co-operative program is very important. All films are developed immediately after each job by our X-ray technician, then interpreted by the staff of our sanatorium of which H. D. Ireland, M.D., is medical superintendent. Everybody receives a personal report, either in an envelope or by interview in the factory, in the mail or through a home call.

Suspicious cases are advised to visit the sanatorium out-patient clinic for 14x17 films, further examinations, study of sputum, gastric contents, et cetera. A local branch of our Michigan State Laboratory makes the latter studies at no charge. After a patient has gone to the sanatorium out-patient clinic for further diagnosis our nurse withdraws and follow-up care is turned over to the Health Departments' Bureaus of Public Health nursing.

The "Means Test" for sanatorium care was eliminated several years ago so that all cases are easily admitted to our sanatorium at public expense. This is important not only to heal the sick but to protect the community. All non-tuberculous conditions are referred to the family doctor.

The unique features about this program are the Mantoux tests for all industrial and community groups when they are X-rayed, the proximity of a state laboratory, our follow-up and personal reporting. Also, everybody strips to the waist and women are covered with a cotton cape for the X-ray. Our 4x10 stereos are considered quite satisfactory and unusual in mass surveys.

The close tie with the county tuberculosis clinic and Sunshine Sanatorium is invaluable and we find positive tuberculin reactors in years gone by who visit the clinic regularly for X-ray films. Many are under private medical supervision. Quite frequently an early activity is discovered through re-ray inspection in our bus. An enormous amount of personal education is given to positive

reactors and their families.

This program was planned with the help of our local medical society, Sunshine Sanatorium, Grand Rapids Health Department, Kent County Health Department and local school authorities. Our broadminded physicians decided that follow-up should be carried through by physicians and nurses skilled in the knowledge of tuberculosis control.

* * * * *

Impetigo,—One of the skin diseases found most often among children is impetigo. In its most common form, impetigo contagiosa, the infection manifests itself in scab-like crusts varying in color from yellow to dark red.

Altho these crusts are sometimes more than an inch in diameter, they are usually smaller and in most cases are limited to the exposed parts of the body—the face, ears, neck, and sometimes the hands. Ordinarily a dozen or so of these sores are present at one time, yet there is very little itching, burning, or pain.

Impetigo is due to certain types of bacteria which are present to some extent on the skin of all persons. Although the disease may occur among people in any age group, it is largely restricted to children under the age of ten.

Any abrasion in the skin may serve as a portal of entry for the bacteria. The disease may occur from picking the face with dirty finger nails. Discharges from the nose and throat may also lead to contamination of the skin.

Impetigo spreads rapidly. Several sores usually appear in a few days or a week after the germs enter the skin. All of the children in a family may become infected if they use a common towel or wash cloth, play together or have other physical contact.

Cleanliness, particularly in the sense of free use of soap and water, and avoidance of picking at the skin are important in the prevention of impetigo. Each child should have his own towel, wash cloth, comb and brush.

Under treatment, a case of impetigo usually clears up within a week or so. It is safer to keep the affected child at home during the first three or four days of treatment than to instruct him not to associate with other children. One attack of impetigo does not produce immunity.

REPORT BY THE COMMITTEE ON THE RELATION OF SCHOOL HEALTH EDUCATION TO COMMUNITY HEALTH EDUCATION

San Francisco, October 1951

The Problem,—Health education is a comparatively new field. Its content is so broad that most definitions fail to include all of its possible ramifications. In both the school and the non-school community more health education takes place than that conducted by health educators. "Health education" may be good or bad, factual or fallacious, but it is always present in some form.

Health educators working with educational agencies have in most instances had a different training and are expected to perform different functions than those employed by public health agencies. This has resulted in limiting definitions of the areas of practice of these two varieties of health educators, with the result that they compete with each other and defend their professional prerogatives whenever one happens to enter the area which the other considers his own. For example, health educators employed by public health agencies find it easy to work with school-aged children because the captive audience they provide is more readily available for educational activities than the individualized audience of the community. On the other hand, health educators employed by educatonal agencies see the need for an adult education program to supplement their work with children in the schools, and frequently involve the community in what they consider their legitimate health education activities.

The competitive strain existing between school and community health educators is enhanced by the lack of understanding of the normal sphere of the health educators' activities by the community which often takes sides in a controversy rather than encourages a co-operative effort to resolve the problems that are common to the community and the school.

A further cause for misunderstanding in the relationship between the school and community health education program is the semantic problems caused by "professional jargon." People with different training and experience give a different connotation to such words as health, health educator, health teacher, health co-ordinator, school health, physical education, community organization and many others. These semantic problems can be multiplied many times by the connotations given to the terms used in the area of health services and medical care, school-child-parent-physician

relationships, school-health department relationships and the other ramifications of interprofessional, interpersonal and interagency activities concerned with child health.

In spite of the fact that health educators desire to be identified as members of a distinctive profession, those who call themselves health educators tend to think of themselves as staff members of an educational or public health agency rather than as health educators. This adds to the confusion.

Training of Health Educators,—There appears to be developing a demand for two types of health educators. One is concerned with classroom teaching in the school and the co-ordination of health education and service interests as they relate to the school child while under the school's jurisdiction. The other type is most frequently found in public health agencies and is concerned with community organization, adult education, and the individual and collective motivation of the community toward more healthful living. In spite of the fact that the report on the "Educational Qualifications of Health Educators" prepared in 1943 by the Committee on Professional Education of the American Public Health Association appeared to include both varieties under one title, there has been a gradual separation of school and community health educators in terms of the function they perform in the community and the type of training that precedes their specific function.

School health educators are usually trained in colleges of education or teacher training institutions. Most of them have entered these schools with the idea of being teachers and have often entered the health field from physical education, home economics or the basic sciences. Their training is based on educational techniques, educational psychology, the biological sciences and educational administration. They are fundamentally school teachers whose interest in health has caused them to specialize in this field much as other teachers specialize in language, mathematics or science. Their professional employment is invariably in educational agencies where they work directly with children in the school, either in direct teaching or in a supervisory capacity over those who do direct teaching. Though at times they may co-ordinate the health interests of the school with other agencies in the community, their approach is school centered and their interest is the child.

The so-called community health educator may have training in education though most frequently has entered the health education field after professional preparation in nursing, medicine, journalism, public relations or public health. These individuals usually

receive their professional health education training in a school of public health accredited to give public health degrees or have acquired their place through long years of experience in health education in public health agencies. They are usually found as employees of health departments or voluntary health agencies. Their activities involve community organization, preparation of educational materials for adult use, the dissemination of health information through such media as the pamphlet, the radio and the public address, and their efforts are community centered or at least directed toward families or family heads. They may at times work in the schools, but this is usually the result of an inadequate school program.

In recent years more school-centered health educators than community-centered health educators have been trained, particularly those who have a basic training in physical education with a Minor in health education. When these individuals have been unable to find their place in a school, some have been employed by health departments. This has produced considerable misunderstanding because they are not qualified to do community health education according to the standards customarily accepted. When employed by a health department they tend to conduct a school program. In a community whose schools are not ready to accept health education as part of the school program this invasion by the health department causes antagonisms between the two agencies which should work most closely together. Though the reverse situation does occur, it is less common.

The Status Quo,—Though there has been an increasing tendency for co-operation between the educational and public health agencies of the community, and therefore a close working relation between the health education interests of these two broad fields, we find that current health education practices vary considerably. They range from highly co-operative programs with an intimate co-ordination between the professions and agencies concerned, to communities in which no relation exists, and in which competition is bitter and unfriendly. In some instances, one agency dominates and the other is not co-operative. In still others no agency is able or willing to do the job of health education that is necessary.

The status of health education in a given community depends on many factors. The administrators of the agencies that normally would be concerned with health education must recognize the importance of health education before they are willing to employ health educators. These administrators must also recognize what

is sound health education and what would be considered a suitable health program for their community in order to select health educators for their staff who have the training and experience and the personal qualifications that meet the needs of their particular agency in the community in which they operate. Even in the presence of interdepartmental co-ordination and well-trained staff members at the state level, the lesser communities may have inadequate health education programs because the selection of local educational and public health personnel is a local responsibility. Their presence is determined by the understanding of health education by local administrators.

The influence of other agencies and local political situations may determine the quality and the quantity of health education that is acceptable to the community and therefore the type and professional qualificaions of the health educators employed. Granting that it is a health educator's responsibility to improve the understanding of the community, the community must be willing to accept the health educator before his employment is possible. The mores and traditions of strong nationalistic or religious groups and the opinions of their leaders will dictate the limits to which a school, a health department or a voluntary agency may go. Equally important is the factor of public indifference which may prevent the local employment of qualified personnal or interfere with their successful operation.

Desirable Objectives,—Ideally, a community and the school it contains should be willing to employ the services of qualified health educators in appropriate agencies, and the work of these agencies should be so co-ordinated that the community's needs are recognized and met so far as possible. Ideally, competition should be replaced by co-operation, interprofessional jealousies should give way to joint planning and jurisdictional disputes should be resolved into co-ordinated activities that accomplish the planned objectives.

Obviously this is not universally possible and probably not desirable in some communities. Nevertheless, it is possible to work toward the happy state where the citizens of a community recognize the value of a well-conceived program of health education, are willing to give it financial support and are willing to spend the time necessary for basic community planning. The school should have on its staff someone who by special training is competent in giving supervision to the health teaching performed in the classroom and to co-ordinate all of the extra-classroom health activities of the school. The school should have a person who understands the inter-

agency and interprofessional relationships within the community so that he may make the maximum use of the communities' resources in meeting the needs of the children in the school. He should have developed an understanding on the part of the teachers in the school that will promote significant referrals, and his relations with the parents of these children and the physicians and dentists who serve them should be such that all children who need health service will quickly reach those who can provide this service.

On the community side there should be a local health department which is adequately staffed according to modern standards and which is meeting the public health needs of the community. The health education activities of the health department should be so co-ordinated with those of the voluntary agencies and the school that the maximum effect is produced with the minimum expenditure of time and money. The voluntary health agencies of the community that have an interest in child health or in health education should recognize their relationship to both the health department and the school, and each should supplement the other in attaining an objective which has been determined by joint planning. The medical and dental professions of the community should have an understanding of the public health and school health program and should be available to both for consultation on matters of medical administration and the provision of health service. In many communities the Welfare Department and Family Service Association would have something to offer to the total health education program, particularly as regards the problems of those who are economically underprivileged or handicapped.

There should be ample opportunity for the expression of public opinion in relation to the total health education program. Parents, represented through civic organizations of one type or another, should have a part in defining the communities' needs and working with those professionally qualified in health and education to meet those needs.

Though this idealistic situation has been reached in only a few communities, there is considerable activity leading to improved school-community co-operation. This approximates the ideal desired by this Association, by several sections of the American Public Health Association, by the Joint Committee on Health Problems in Education of the NEA and AMA, by the National Conference for Co-operation in Health Education and by the National Health Council. It has been indicated in the deliberations of the National Conference on Physicians and Schools.

Means for Attaining These Objectives,—It is obvious that the primary need in approaching the idealized objective above is the training of educational and health personnel in the responsibilities of other professions and in a willingness to co-operate with those having a different training. Since public acceptance is such a large factor in the development of a smoothly operating health education program, the early training of children who will be the citizens of tomorrow in the patterns of community organization and an understanding of their community facilities and how to use them is of primary importance.

Assuming that the professional administrators of the communities' agencies, including the school, are favorably inclined toward co-operative ventures, and assuming that the citizens of the community are willing that these co-operative activities exist, the mechanism which has been most successful in producing co-ordinated co-operation has been the council.

Many approaches may be made to the development of councils. In some communities a School Health Council, consisting of selected school faculty, student representatives and representatives of the professional associations in the community, has been the nucleus about which the community activity has been crystallized. In other communities a Community Health Council has been formed which aids not only in co-ordinating the health interests of the community but in relating them to the school by drawing the school into the total community thinking. In still other communities the Community Council or a Council of Social Agencies has been the basic organization, with subdivisions concerned with community health, school health, recreation, delinquency and other closely related problems. Such all-inclusive groups are concerned with the total inter-agency problem of health education and community development.

It is immaterial which pattern is used by any given community so long as the pattern is consistent with the problems which that particular community considers important and wants to solve. The creation of a co-ordinating council of this type for the sole reason of having such a council should be questioned. Co-ordinating activities have significance only when they work toward the solution of problems. Furthermore, a co-ordinating agency should not perform the work which its member agencies must perform in order to justify their existence in the community. In other words, the school, the health department and the voluntary agency have responsibilities in health education. The health council should, therefore, not

perform health education functions per se, but should create the climate which makes the health education functions of its member agencies more effective.

It is recognized that one of the most salutary influences on a community's health program is an adequate local public health administration. There are many reports that indicate the justifiability of the school helping the community to understand and be willing to create an acceptable local health department. Without a health department, the school is often forced to do a community health education job and administer health services for school-aged children which are not normally part of its responsibility. If the school is successful in creating a public opinion that establishes a health department, there is an opportunity for a division of labor and the development of community activities on a co-operative basis between the school and the health department, so that child health services are performed under proper professional auspices and supervision.

An important factor in the development and maintenance of the proper relationships between the school health education program and the community health education program is an understanding of interprofessional relations and inter-agency relations by the professional associations of the community and the physisians and dentists serving the child population. Schools and public health agencies have a responsibility in promoting this understanding. They must recognize that physicians and dentists know more about the problems of medical care than educators will ever know, as well as that educators have a better understanding of educational techniques and are better able to administer educational programs than are physicians and dentists. The interprofessional relationships of these groups must operate both ways. In the development of sound relationships between the school health education program and the community health education program all parties concerned must recognize the importance of all interests participating in the planning at the earliest possible stage.

Planning implies co-operation. It is not uncommon to find one agency or professional group being considerably ahead of others in its understanding of the health education needs of the community. This often causes such an agency to proceed with planning without the assistance of the other community interests and to expect co-operation with its plan after the plan has been completed and its administration started. As a rule this leads to antagonism and competition rather than co-operation.

Recommendations,—In view of the foregoing observations by its members, the Committee on the Relation of School Health Education to Community Health Education of the American School Health Association makes the following recommendations to the Council of the Association:

1. That the Association encourage educational institutions training professional health educators to teach their professional students to recognize the need for both varieties of specialists in health education, to understand the function expected of their counterpact and to motivate them to co-operate in the interests of an effective community health program.

2. That the Association recognize the importance of joint planning of community health activities, particularly health education, and that valuable tools for co-operative activity at the local level are the interprofessional conference, the work shop, the health council, the health division of councils of social agencies or such other co-ordinating council or planning group as may fit the peculiar problems of any given community.

3. That educators be helped to recognize the importance of effective public health administration in improving the health of families and the school-aged children within them, and lend support to the development of local public health activities that meet the needs of a particular community.

4. That public health agencies be helped to recognize the importance of a sound school health program including adequate classroom teaching of healthful living as an adjunct to the public health program administered by the health agencies of the community.

5. That the council consider the dismissal of its Committee on the Relation of School Health Education to Community Health Education because a growing co-operative relation between these two professional fields is quite evident.

Respectfully submitted,

Edna Bailey, Ph.D.,
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Donald A. Dukelow, M.D., *Chairman.*

PROGRAM, ANNUAL MEETING
N. Y. STATE ASSOCIATION OF SCHOOL PHYSICIANS
and
N. Y. STATE SCHOOL NURSE-TEACHERS ASSOCIATION

Lake Placid, N. Y.

Monday, June 2, 1952

8:00 P.M.: Executive Committee Meeting—School Physicians. Game Room, The Homestead.

Tuesday, June 3

9:30 A.M.: Annual Business Meeting and Conference—School Physicians. Game Room, The Homestead.

12:00 Noon: Luncheon—School Nurse-Teachers and School Physicians. St. Moritz Hotel.

2:30 P.M.: Scientific Meeting. High School Auditorium.

Presiding: Dr. Wm. E. Ayling, School Health Director, Syracuse, N. Y.
Past President, N. Y. State Association of School Physicians

Presidential Address

Dr. Edith G. Mead, President
School Physicians Association, Poughkeepsie, N. Y.

Observations on School Health

Dr. George M. Wheatley, 3rd Vice-President
Metropolitan Life Ins. Co., New York City

The Role of the Schools in Civil Defense

Mr. John Moehle, Co-ordinator of Civil Defense
N. Y. State Department of Education, Albany, N. Y.

School Nursing Problems

Miss Marie Swanson, R. N., Asst. Director
N.O.P.H.N., New York City

8:00 P.M.: Scientific Meeting. High School Auditorium.

Presiding: Dr. Edith G. Mead, President
N. Y. State Association of School Physicians

School Cardiac Problems

Dr. J. G. Fred Hiss, School Cardiologist, Syracuse, N. Y.

Problems of Adolescence

Dr. J. Roswell Gallagher, Children's Medical Center, Boston, Mass.

Cancer in Childhood

Dr. Theodore J. Curphey, Chairman, Council Committee on Public Health and Education, Medical Society of the State of N. Y.

N. Y. STATE SCHOOL NURSE-TEACHERS ASSOCIATION

Monday, June 2, 1952

7:30 P.M.—Open House. Game Room, St. Moritz.

Tuesday, June 3

9:00 A.M.—Short Business Meeting. Lobby, St. Moritz.

9:30 A.M.—Group I: Workshop in School Health Problems. Lobby, St. Moritz.

10:30 A.M.—Group II: Workshop in School Health Problems. Lobby, St. Moritz.
Mrs. Josephine McFarland, Miss Leila Wager
Assistants in School Nursing, State Education Department, Albany, N. Y.

9:30 A.M.—Group II: Workshop in Hearing Testing. Game Room, St. Moritz.
Miss Margaret M. Walsh, Assistant in Hearing Testing
State Education Department, Albany

10:30 A.M.—Group I: Workshop in Vision Testing. Game Room, St. Moritz.
Miss Jane Anderson, Assistant in Vision Testing
State Education Department, Albany

12:00 Noon—Luncheon: School Physicians and School Nurse-Teachers. St. Moritz Hotel.

2:30 P.M.—School Physicians Program. High School.

8:00 P.M.—School Physicians Program. High School.

Wednesday, June 4

12:00 Noon—School Nurse-Teacher Luncheon. St. Moritz Hotel.
Progress in School Nursing
Miss Marie Swanson, Assistant Director, NOPHN

* * * * *

Rabies,—Four relatively inexpensive steps can guard your community against a rabies epidemic. As summarized by Dr. James H. Steele of the U.S. Public Health Service, they are:

1. Set up, preferably under health department direction, a properly staffed service for the impounding and destruction of stray and ownerless dogs.

2. Require that dogs be vaccinated annually against rabies, as a prerequisite to licensing, with clinic facilities for pets of owners unable to afford the fee.

3. Obtain police vigilance in the punishment of license violations.

4. Educate the public to the knowledge that the roaming, unimmunized dog is the key to epidemic rabies.

NURSING PLANS TO REORGANIZE*

Before next fall, nursing expects to have a new national organizational structure. Instead of the six national organizations that are now concerned with professional nursing, there probably will be only two. These will be the American Nurses' Association and the National League for Nursing.

Since 1945, thousands of persons have carried forward the search for a structure that would provide greater unity for nursing organizations and their progams. Many committees — national, state, and local—have been hard at work. A formal study and report were made by a public relations firm specializing in membership organizations.

In 1950, all six participating groups voted to realign into two organizations. They asked national committees to work out the details of a plan so that it would be ready for action by the members during the summer of 1952. It was understood that one of the organizations would be the American Nurses' Association and that it would continue to be an all-professional nurse organization exclusively for professional nurses. The other was to be a new organization for all those interested in improving nursing services and education—nurses and non-nurses alike.

Among many other activities, the ANA will:

1. Define the functions of nurses and promote standards of professional nurse practice.
2. Define the qualifications for the practitioners of nursing, including those in the various nursing specialties.
3. Promote legislation and speak for nurses in regard to legislative action concerning general health and welfare programs.
4. Survey periodically the nurse resources of the nation.
5. Provide professional counseling service to individual nurses in regard to vocational and educational opportunities and to employers of nurses in regard to available nurse personnel.
6. Represent nurses and serve as their national spokesman with allied professional and governmental groups and with the public.
7. Serve as the official representative of American nurses in the International Council of Nurses.

The revised plan for the ANA provides sections for the following groups: (1) private duty nurses, (2) general duty nurses, (3) public health nurses, (4) institutional nursing service administrators, (5) educational administrators, consultants, and teachers,

* An abstract of publicity issued by the Joint Co-ordinating Committee on Structure of the Six National Nursing Organizations.

(6) industrial nurses, and (7) unaffiliated or special groups section.

"National League for Nursing"—or, more briefly, "NLN"—is the name being proposed for the new national nursing organization.

Among many other activities, the NLN will:

1. Define and promote standards for organizing nursing services and guide communities in achieving these standards. (Organized nursing services include those provided by hospitals, industries, schools, visiting nurse associations, health departments, and other community agencies.)

2. Promote education for nursing in all fields by defining and developing sound standards of nursing education, and guide educational institutions in achieving these standards.

3. Promote the extension and proper distribution of facilities for organized nursing service and education throughout the country.

4. Represent organized nursing services and nursing education units and serve as spokesman with allied professional, governmental, and international groups and with the public in regard to matters related to the purpose of the National League for Nursing.

5. Accredit educational programs in nursing.

Both individuals and agencies will be eligible to join the NLN. Individual members will include professional nurses in all fields of and positions in nursing; members of boards and committees associated with nursing services and educational units; members of allied professional groups; and other citizens who are interested in seeing that there are sound standards for nursing service and education. Students of professional nursing will also be members, participating in a council of their own.

Accordingly, the new organization will have two membership divisions—the Division of Nursing Services and the Division of Nursing Education.

Practical Nursing

As plans for the new structure progressed, representatives of the national nursing organizations became increasingly aware that, to achieve its objective, the NLN should plan for the development and improvement of *practical* as well as professional nursing service and education. (More definite plans for including practical nurses are now in the process of being worked out.)

State and Local Units

Both the ANA and NLN will have state and local or district units. The ANA will continue to be a federation of state nurses' associations. Most of these state associations are divided into districts so that members may carry forward a well-developed and direct program in addition to state and national programs.

The National League for Nursing, too, will have constituent units in the states, and a State League for Nursing will have district units. It is intended that, when the members take necessary action, a State League for Nursing will take the place of any and all of the following groups that may now be organized in a state: State League of Nursing Education, State Organization for Public Health Nursing, State Association of Industrial Nurses, and a state Committee on the Improvement of Nursing Services.

* * * * *

Scabies,—Scabies, or itch, is another skin disease common among school children. The infection is due to infestation by animal parasites. Although the parasites have an appearance somewhat like lice, they are scarcely visible to the naked eye. Usually there are thousands of them on the body before the victim discovers that he has a skin infection.

These little mites burrow within the top layer of the skin producing small pimples and blisters. On the surface of some of these sores may be seen delicate, black, thread-like lines from an eighth to a quarter of an inch long. Each line is the path of a parasite in the skin—a furrow filled with dirt, eggs and excrement. There are a dozen or more eggs in each furrow, with the mite at one end. These eggs give rise to new mites which crawl out on the surface of the skin.

The parts of the body that are usually infected are the trunk and extremities, including the hands. Except in infants, there is usually no sign of the disorder above the collar line or below the ankles.

The most common symptom of scabies is itching which may be almost unbearable, particularly at night. Considerable itching may also be experienced during the day if the body becomes warm from exertion or from an overheated room or the wearing of excessive clothing. Scratching may lead to scars or to secondary infections of the skin.

Scabies is transmitted from one person to another by direct physical contact. One who sleeps in bed with an infected person is almost certain to get the mites on his body. For this reason, entire families often have to receive treatment. Proper cleanliness and body care, coupled with frequent change of underclothing and bedding, are important in the control of the disease.

Prompt recognition of these skin infections by parents and teachers will help prevent the spread of disease and bring relief more quickly to infected children. Immediate medical attention will lead to early recovery. Illinois Health Messenger, October 15, 1951.

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EDITORIAL

The leading article of the April 1952 issue of the Journal of School Health was by Jennelle Moorhead, M.S., on the topic, "What Is the Training of Health Teachers in Oregon High Schools?"

This article is based on a study of the transcripts which covered the training of the health teachers of the Oregon Junior and Senior High Schools. The returns were from 227 of the 260 high schools in Oregon. Thirty-three percent of the 367 health teachers of these high schools had not completed their bachelor's degree work.

The study shows some conditions indicative of marked weaknesses in the preparation of these teachers. They seem best prepared in structure and function of the human body — which are so largely out-dated in our present-day concept that a good health course should emphasize how to live healthfully, and that anatomy and physiology, which made up such a large part of the course of study and of the textbooks for pupil use forty years ago, should have a minor part in health instruction today.

* * * * *

CHANGE OF ADDRESS must be received by the 15th of the month preceding the date of change. Returned Journals cannot be forwarded. Editor.

The training of these teachers seems weak in techniques and materials.

Furthermore, the study disclosed that the Education major group had no courses in public health or in the psychology of adjustment. In other words, the "educators" are continuing their old game of largely ignoring basic Physical Education and Health Education Training. Even biology majors lacked courses in Public Health, Communicable Disease, Community Hygiene, and Nutrition.

Two factors seem to stand out. There is "no apparent ordered program of study or curriculum leading to teaching in health," and "the ordinary preparation of a teacher with respect to health is at a low level."

There are some twenty-five different types of "majors" acting as health teachers.

This editorial is not an effort to belittle the health instruction in Oregon. It is, however, desired to call attention to fundamental weaknesses which are not peculiar to Oregon. It has much company in its remissnesses. On the other hand, there are a few states where teacher training standards for high school teachers in health are much higher. We hope that some day an informed person in one of these advanced states will give us an analysis of a better setup.

Much of the trouble, probably by far the largest part of it, is due to the attitude of school administrators who are not particularly interested in health and therefore do little to further it.

For more than a generation "educators" have put health at the top of their list of objectives, but at the bottom of their list of activities.

"*Dolce far niente*" never won a race nor a battle.—*C. H. Keene.*

* * * * *

Are you
"Skinny and sulky"
or
"Curvaceous and contented?"

* * * * *

SUBSCRIPTIONS are not retroactive, but become operative the month following receipt of payment. The Journal is not published in July or August.

ABSTRACTS AND NOTES

Basketball in Junior High Schools,—To the Editor: The chairman of our junior high school study group approached me in regard to obtaining your opinion on the effect of competitive basketball on the health of boys from 11 to 14 years of age. Many parents are eager to have their boys engage in competitive sports, and many others feel that such play is detrimental to the health of growing boys. I would appreciate an opinion on this subject. *John W. Conklin, M. D.*, Platteville, Wis.

Answer,—When basketball is appropriately modified to meet the needs of this younger age group, there is no reason why those who are found to be fit by medical examination should not participate under proper control. An intramural program that stresses opportunity for all students to play against others of about equal ability, age, height, and weight is recommended. An interschool program of the "varsity" type, which generates pressures that may cause immature youths to overtax themselves or that limits participation to a few, is not recommended. For this age group, shorter quarters, more frequent time-outs, and other suitable modifications in rules are strongly urged. Other suggestions that will help to make participation safe and healthful were adopted by the National Joint Committee on Standards for Boys' Athletics and were endorsed by the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association:

1. A health examination should be required previous to participation, preferably on a seasonal basis, with annual examination a minimum requirement.

2. A physician should be present at all contests involving activities where the injury hazard is pronounced.

3. A contestant who has been ill or injured should be readmitted to participation only on the written recommendation of a physician.

4. A contestant upon returning to participation after illness or injury should be carefully observed, and if there is any doubt as to his condition, he should immediately be referred to a physician.

5. The coach (faculty member in charge) should be competent in first aid and thoroughly versed in sports conditioning and training. It is also strongly recommended that all players be given basic instruction in first aid.

6. In case of head, neck, or spine injury, or suspicion thereof, the player should be removed from play, placed at rest, and be given the immediate attention of a physician.

7. Every school should have a written policy regarding the responsibility for injury incurred in athletics, and this policy should be known to all participants, their parents, and other responsible adults. Arrangements should be made for obtaining and paying for medical and hospital care of injured participants, in accord with local policy.

8. The best obtainable protective equipment should be provided for all participants, and special attention should be given to proper fitting of such equipment.

9. Competition should take place only between teams of comparable ability, and playing seasons should be limited to reasonable duration.

10. No preseason games should be played until players are well drilled in fundamentals and have had a minimum of two weeks of physical conditioning.

11. Playfields should meet standard requirements for size of area, playing surfaces, and facilities for safety, and all reasonable precautions should be taken to prevent accidents.

12. Contests should be selected, and rules and lengths of playing periods should be such that they will not overtax the physical abilities of the students concerned. Journ. Am. Med. Ass'n, March 15, 1952, p. 975.

* * * * *

Disinfection of Books,—To the Editor: What precautions should be taken with books to prevent the spread of contagious disease? *Julia Baker, M.D.,* Campos Eliseos, Mexico. Answer,—Ordinarily, little concern is given now to books as vectors of disease. At one time, fumigation was commonly used, but this method was found ineffective for the destruction of bacteria. For terminal disinfection, fumigation has been almost totally abandoned. Books in the patient's room may be treated much the same as other articles that cannot be boiled or washed with soap and water. Books should be exposed to sunlight if possible, and the room should be aired for at least 12 hours. Daily newspapers and magazines are allowable because they can be burned later. Books from public libraries are probably never responsible for the spread of common contagious diseases. Even if they have been contaminated, the bacteria do not live long; however, there is at least one outstanding exception to the foregoing statements. Smallpox is more likely to be transmitted by inanimate objects than is the case with any of the other common contagious diseases. Books or personal belongings of a smallpox patient should, if possible, be destroyed. If not, they should be autoclaved at about 15 lb. pressure for 30 minutes. *Journ. A.M.A., March 22, 1952, p. 1070.*

What Teachers Should Know About Classroom Lighting,*— In order to introduce more daylight into classrooms, some schools are being built with window areas running from the ceilings to about 30 inches above the floors and extending the full length of the classrooms. In others, directional glass blocks in the upper part of window areas divert the light rays upward toward highly reflective white ceilings from which the light is reflected to the inner portions of the classrooms.

In one-story schools two methods of lighting the inner sections of classrooms have been employed. One method is to build the roof in two levels so that the part of the classrooms farthest from the outside windows may be lighted by clerestory windows located about equidistant from outside and corridor walls. In other one-story schools light has been introduced above the corridors on the inner side of the classrooms.

The inside area of a classroom receives its light from the upper portion of the window. Double shades should therefore be hung at the center of the windows—one portion to be drawn up and the other down.

The shades should be of light-colored, translucent cloth. This is important. The purpose of the shade is to eliminate the direct rays of the sun but at the same time permit considerable light to enter.

Teachers should know that painting a classroom can improve seeing conditions. Colors employed in ceilings, walls, chalkboards, bulletin boards, wood trim, floors, and furniture greatly affect lighting.

Best specifications, to date, call for ceilings of white, reflecting 85 per cent of the light; walls painted light pastel shades, reflecting at least 60 per cent of the light; chalkboards of a green shade, reflecting 20 to 26 per cent of the light; light-colored floors, reflecting 30 to 40 per cent of light; wood trim light in color to match walls, or finished natural wood color; furniture light in color to reflect 30 to 40 per cent of light.

Note that dark woodwork and black chalkboard, which absorb light, are not desirable. Absorbed light is no longer useful; reflected light is usually better. Another good effect of the elimination of these dark objects in the classroom is the reduction of brightness contrasts to which the eye is constantly forced to adjust, with ultimate weakening of the eye. If you have black chalkboards, you

* Abstract from the Education Digest, March 1952, p. 38, and N. E. A. Journal. By Homer W. Anderson.

may arrange to have them painted with special green paint.

There still remains the need for good supplementary artificial lighting for dark days or for rooms with insufficient window area (at least 20 per cent of floor area).

Lights may be incandescent or fluorescent. In either case the lights should be the luminous semi-indirect type to protect the eyes from too great brightness. The luminous shade under the lamp should permit about 30 per cent of the light to flow directly downward. About 70 per cent should be reflected from the ceiling. It should be possible to turn on the inner lights in the room to supplement the daylight.

No child in any activity should be permitted to face a bright source of light for any length of time. Attention should be given to right- and left-handed children to see that light comes to them from the proper direction.

* * * * *

REVIEWS

School Health and Health Education, *C. E. Turner with Editorial Assistance of C. Morley Sellery,* The C. V. Mosby Co., St Louis, 1952, 472 pp., 2nd edition. Price $3.50.

This text deals with the educational aspects of the school health program and with the organization, methods and procedures in health education great emphasis is given to the training and duties of the school health services personnel.

Chapters are followed by thought provoking Questions and Answers, and the text ends with an excellent Bibliography in the school health field.—*C. H. Keene.*

* * * * *

Environment and Health, *U. S. Public Health Service,* Washington, D. C., 1951, 152 pp. 75 cents.

Devoted to better protection of individual, home and community this monograph covers water and its pollution and protection, air and food safety, home safeguards and refuse control. Sections are included on Refuse Control, School and Rural Environments, Protection of Travellers and Industrial Health. Profusely illustrated.—*C. H. Keene.*

* * * * *

MEETINGS

The American School Health Association and American Public Health Association at Cleveland, Ohio, October 19th to 24th, 1952.

The New York State Association of School Physicians at Lake Placid, New York, June 3rd, 1952, in association with the Annual Conference of School Health Nurses.